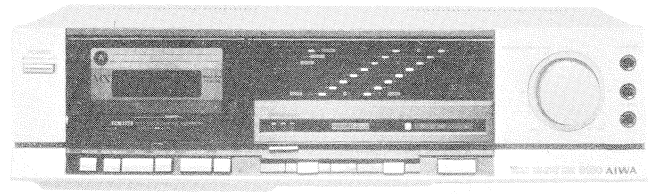
SERVICE MANUAL

MODEL NO.

AD-3150

STEREO CASSETTE DECK



Code No. 04-315-000-95

TYPE. H,HU,U,C,E,K,G,Z

DATE OF ISSUE 8/1982

SPECIFICATIONS

Semiconductors:	5 ICs, 46 transistors, 14 diodes, LED's
Power supply:	H, HU models AC 120/220/240V, Switchable 50/60 Hz U, C models AC 120V, 60 Hz E, Z models AC 220V, 50/60 Hz K, G models AC 240V, 50/60 Hz
Power consumption:	H, HU, U, C models 13W E, K, G, Z models 14W
Dimensions:	420(W) x 110(H) x 280(D) mm [16–1/2" x 4–3/8" x 11–1/4"]
Weight:	4 kg (8.81 lbs.)
Track type:	4 tracks 2 channel
Tape speed:	4.8 cm/s (1-7/8 ips)
Wow and flutter:	Less than 0.038% (WRMS) According to DIN 45500 0.1%
Automatic stop system:	Full auto stop
Automatic shut-off action time:	Less than 5s.
Pinch roller pressure:	125 ± 15 g (1.23 ± 0.15N)
Take up torque:	$35 \begin{smallmatrix}+15\\-5\end{smallmatrix}$ g-cm (0.343 $\begin{smallmatrix}+0.147\\-0.049\end{smallmatrix}$ mN · m)
FF & rewind torque:	$110 \begin{smallmatrix}+20\\-10\end{smallmatrix}$ g-cm (0.98 $\begin{smallmatrix}+0.196\\-0.098\end{smallmatrix}$ mN · m)
FF & rewind time:	90 ± 5s. (C-60)
Playback output: (TTA-161)	490 ± 50mV (LINE)
Playback noise: (Unweighted)	Less than 1.3mV (METAL, CrO_2, DOLBY NR ON) Less than 2.3mV (LH DOLBY NR ON)
Rec./PB putput: (TTA-119G)	OVU $\begin{smallmatrix}+1.5\\-2\end{smallmatrix}$ dB (LINE)
Rec./Pb distortion:	H, HU, U, C, E, K, G Less than 2.5% (METAL) Less than 2.0% (CrO_2) Less than 1.5% (LH) Z model Less than 3% (CrO_2)
Rec./Pb SN ratio: (Unweighted)	More than 41/46 (METAL, DOLBY NR OFF/ON) More than 43/46 dB (CrO_2, DOLBY NR OFF/ON) More than 41/46 dB (LH, DOLBY NR OFF/ON)
(WTD-A)	More than 45/52 dB (METAL DOLBY NR OFF/ON) More than 50/55 dB (CrO_2 DOLBY NR OFF/ON) More than 45/52 dB (LH DOLBY NR OFF/ON)
Channel separation: (1 kHz, 0 VU)	More than 30 dB
Cross talk: (1 kHz, 0 VU)	More than 60 dB
Erasing ratio: (125 Hz, 0 VU, +10 dB)	More than 57 dB (METAL)
Bias frequency:	85 kHz
Frequency response:	METAL 20 ~ 18,000Hz CrO_2 20 ~ 17,000Hz LH 20 ~ 16,000Hz
Motor:	DC EG motor
Head:	DX head (for Rec./Pb)
Inputs:	MIC maximum input sensitivity: 0.3mV (200Ω – 10kΩ matched) LINE IN maximum input sensitivity: 50mV (more than 50kΩ) DIN max. sensitivity (Z model only): 0.1mV/kΩ (3.3kΩ)
Outputs:	LINE OUT standard output level: 0.41 V (0 VU); suitable load impedance: more than 50 kΩ; DIN standard level (Z model only): 0.41 V (0 VU) Headphones:8Ω

- Specifications and external appearance are subject to change without due to product improvement.
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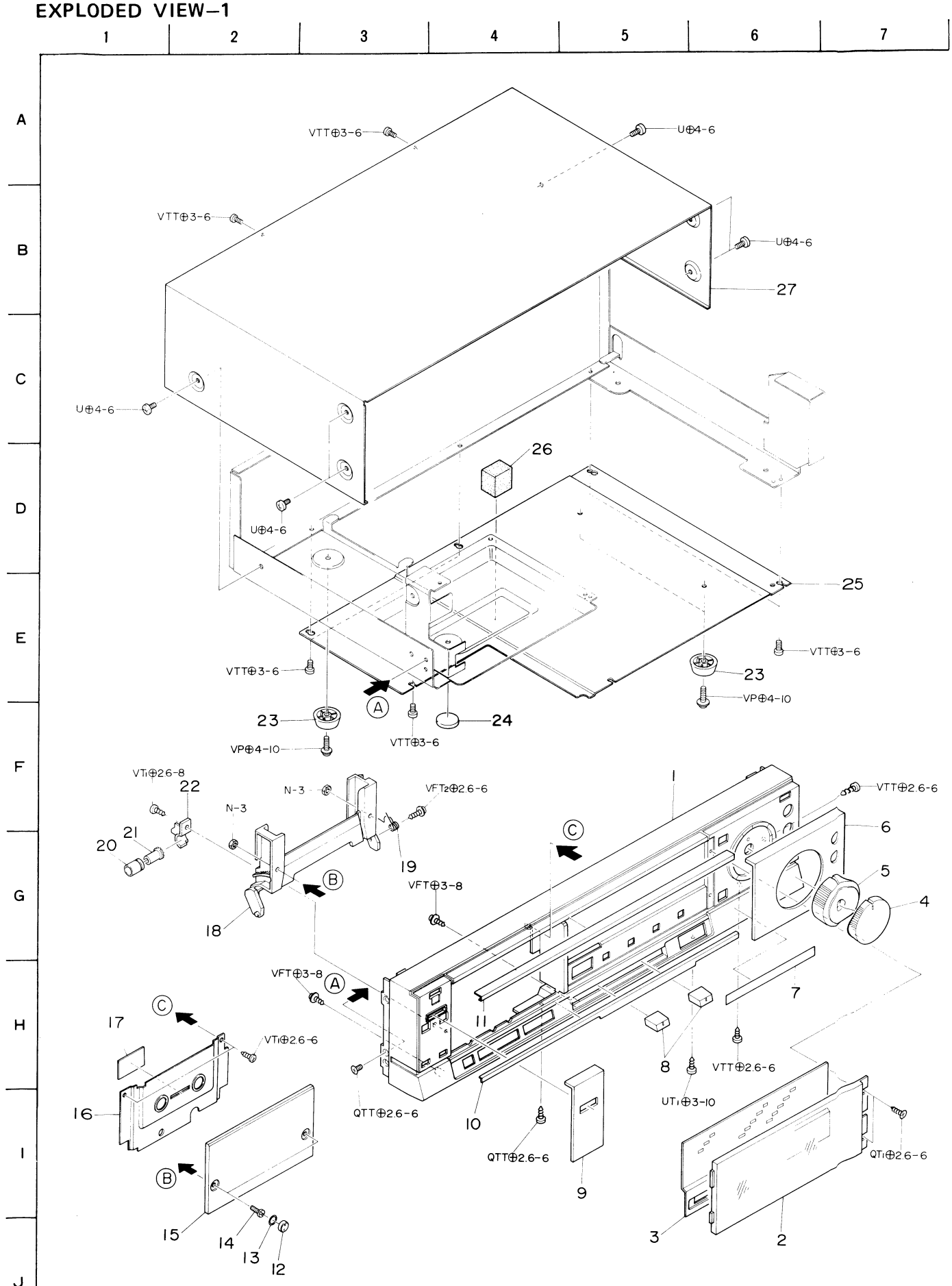
EXPLODED VIEW–1

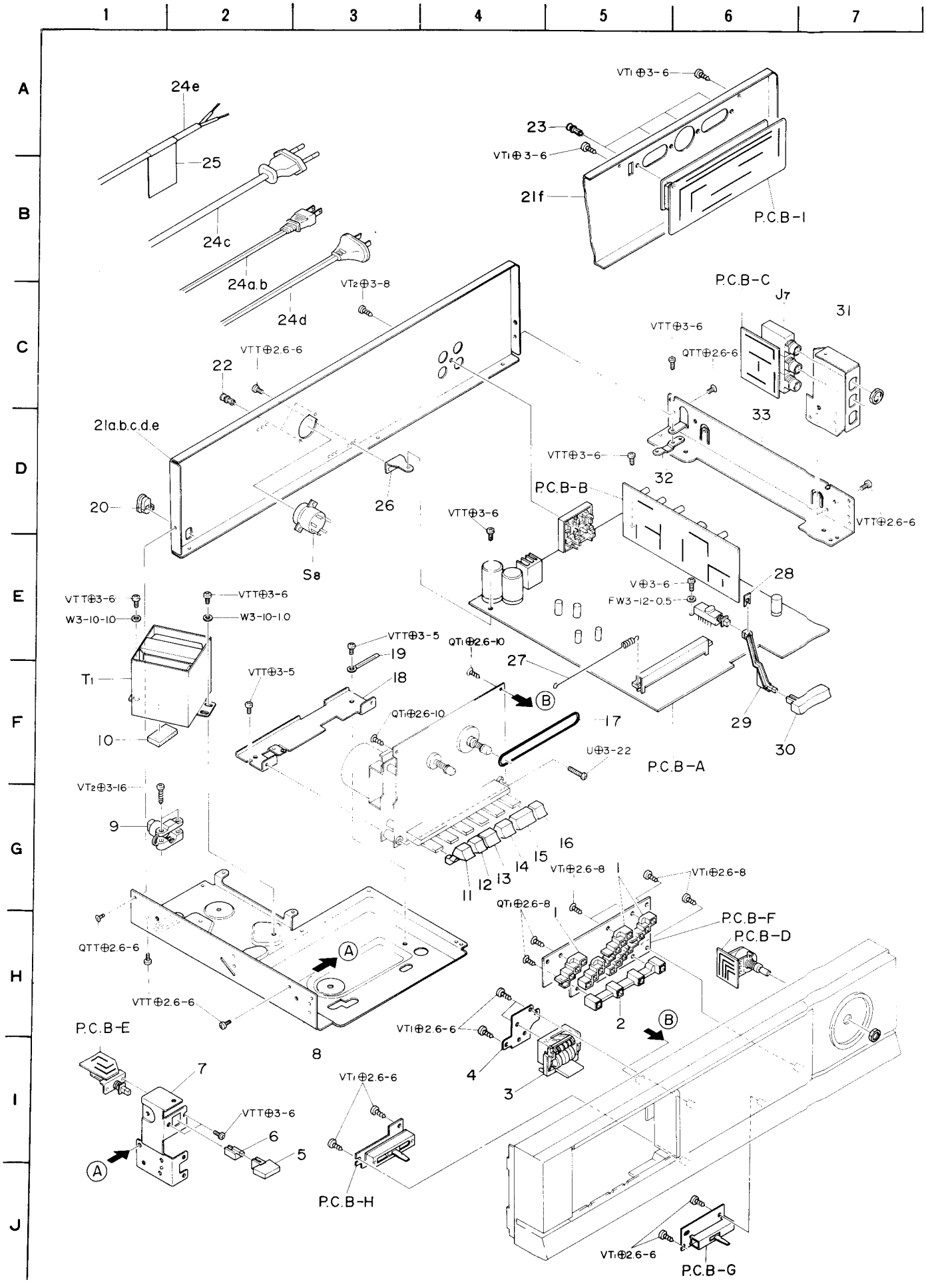


PARTS LIST

MECHANICAL PARTS

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1-1	82-187-001-21		Cabinet, Front	*	1
1-2	82-185-004-01		Window, Meter	AD-3250	1
1-3	82-187-005-01		Plate, Meter	*	1
1-4	82-176-009-01		Knob, REC A_2		1
1-5	82-175-029-01		Knob, REC B		1
1-6	82-185-003-11		Panel, Front B	AD-3250	1
1-7	82-185-025-01		Sheet, Bias Insulation	AD-3250	1
1-8	82-185-014-01		Slide knob, BIAS	AD-3250	2
1-9	82-187-003-01		Panel, Front C	*	1
1-10	82-187-006-01		Control Plate B	*	1
1-11	82-185-017-01		Plate, Top	AD-3250	1
1-12	82-175-010-01		Cap	AD-3500	2
1-13	82-176-215-01		Adhesive sheet 7ϕ	AD-3100	2
1-14	82-175-213-01		Screw, 3–6.5	AD-3500	2
1-15	82-176-019-01		Window, Cassette B	AD-3100	1
1-16	82-175-033-01		Plate, Cassette		1
1-17	82-185-029-01		Label, Tape indication	AD-3250	1
1-18	82-187-014-01		Cassette box ass'y B	*	1
1-19	82-185-213-01		T-spring, Eject	AD-3250	1
1-20	82-185-212-01		Oil-dump bearing	AD-3250	1
1-21	82-534-264-01		Gear, Oil-dump		1
1-22	82-175-210-11		Holder, Oil-dump	AD-3500	1
1-23	87-085-161-01		Foot		3
1-24	82-168-025-01		Rubber foot	AD-3600	1
1-25	82-168-018-11		Cabinet, Bottom	AD-3600	1
1-26	82-735-209-11		G cushion		1
1-27	82-175-009-01		Cabinet, Steel	AD-3500	1

EXPLODED VIEW–2

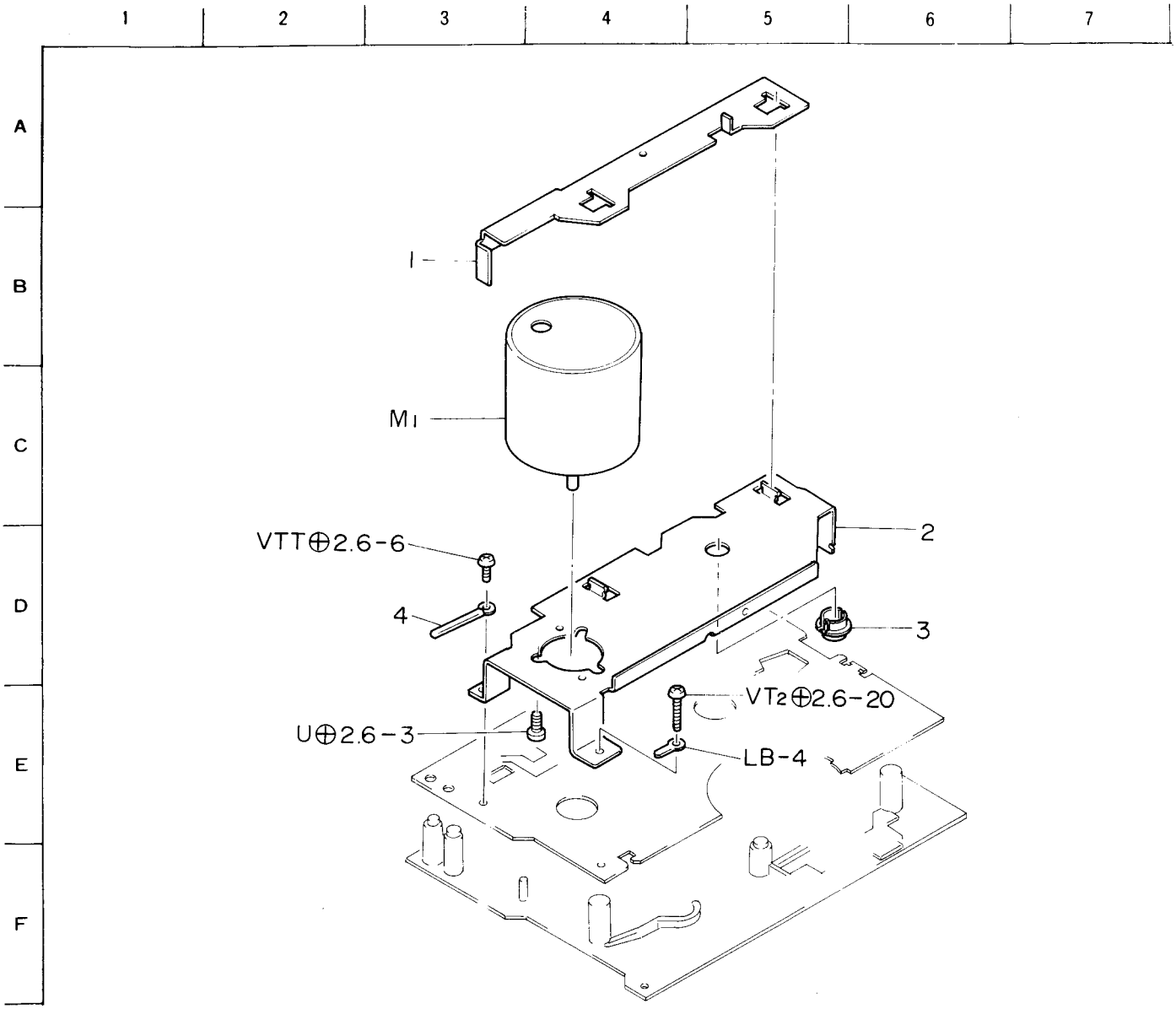


Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-185-205-01		Guide, LED A	AD-3250	3
2-2	82-185-206-01		Guide, LED B	AD-3250	1
2-3	87-040-146-11		Counter		1
2-4	82-185-202-01		Holder, Counter	AD-3250	1
2-5	84-120-015-01		Push-button, POWER		1
2-6	82-176-206-01		Rod, POWER		1
2-7	82-185-204-01		Holder, POWER	AD-3250	1
2-8	82-175-208-11		Chassis A, Amp		1
2-9	87-085-166-01		Holder, AC power cord (E, K, G, Z models only)		1
2-10	82-168-232-01		U cushion		1
2-11	82-185-007-11		Push-button, REC	AD-3250	1
2-12	82-185-011-11		Push-button, REW	AD-3250	1
2-13	82-185-006-11		Push-button, PLAY	AD-3250	1
2-14	82-185-010-11		Push-button, FF	AD-3250	1
2-15	82-185-008-11		Push-button, STOP	AD-3250	1
2-16	82-185-009-11		Push-button, PAUSE	AD-3250	1
2-17	82-535-210-01		Belt, Counter		1
2-18	82-185-216-01		Holder, Mechanism	AD-3250	1
2-19	87-038-039-01		Wire binder		1
2-20	87-085-165-01		Cord bushing (H, HU, U, C, models only)		1
2-21a	82-187-007-01		Panel, Rear H (H, HU models only)	*	1
b	82-187-007-01		Panel, Rear (U, C models only)	*	1
c	82-187-009-01		Panel, Rear (E model only)	*	1
d	82-187-010-01		Panel, Rear K (K model only)	*	1
e	82-187-013-01		Panel, Rear G (G model only)	*	1
f	82-187-012-01		Panel, Rear Z (Z model only)	*	1
2-22	87-085-090-01		Nylon rivet 3–6.5 (H, HU models only)		2
2-23	87-084-077-01		Nylon rivet 3.5–4.5 (Z model only)		4
2-24a	87-034-826-01		AC power cord (H, HU models only)		1
b	87-034-951-01		AC power cord (U, C models only)		1
c	87-034-877-01		AC power cord (E, Z models only)		1
d	87-034-872-01		AC power cord (K model only)		1
e	87-034-892-01		AC power cord (G model only)		1
2-25	87-056-008-01		Lavel, AC power cord (K model only)		1
2-26	82-168-213-01		Holder, Circuit board		1
2-27	82-185-219-01		E-spring, REC	AD-3250	1
2-28	82-186-277-01		Stopper, Rod		1
2-29	82-185-203-01		Rod, DOLBY A	AD-3250	1
2-30	82-187-002-01		Push-button DOLBY B	*	1
2-31	82-185-201-01		Holder, MIC jack	AD-3250	1
2-32	82-185-215-01		Holder, Circuit board	AD-3250	1
2-33	82-185-214-01		Chassis B_2, Amp	AD-3250	1

EXPLODED VIEW–3

As the MD-3 Mechanism is adopted in this model, the exploded view is omitted --- See the supplement MD-3 Mechanism manual in case of repair and parts order.

The following is the exploded view of the exclusive mechanism and the motor attachments. The part-code list of such is described as well.



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
3-1	82-175-220-21		Slide plate ass'y	AD-3500	1
3-2	82-585-281-31		Holder, Motor		1
3-3	82-585-326-11		Thrust bearing B		1
3-4	87-038-039-01		Wire binder		1

ACCESSORIES/PACKAGE

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1a	82-187-852-01		Printed indiv., Packing (H, HU, C, E, K, G, Z models only)	*	1
1b	82-187-855-01		Printed indiv., Packing (U model only)	*	1
2a	82-185-852-01		Cushion L, Printed indiv. (H, HU, C, E, K, G, Z models only)	AD-3250	1
2b	82-176-852-01		Cushion L, Printed indiv. (U model only)		1
3a	82-185-853-01		Cushion R, Printed indiv. (H, HU, C, E, K, G, Z models)	AD-3250	1
3b	82-176-853-01		Cushion R, Printed indiv. (U model only)		1
4	87-051-135-11		Poly-vinyl sack		1
5	87-056-512-01		Sheel, Cassette guide		1
6	87-056-628-01		Poly-vinyl sack		1
7	82-187-903-01		Instructions booklet	*	1
8	87-051-171-11		Poly-vinyl sack		1
9	87-056-008-11		Label, AC power cord (K model only)		1
10	87-056-009-51		Distributors list (H, C, E, K, G, Z models only)		1
11	87-056-045-01		Guarantee card (HU, U models only)		1
12	87-056-050-11		Safety instructions (HU, U models only)		1
13	87-056-057-01		Service station list (HU, U models only)		1
14	87-056-059-01		Guarantee card (G model only)		1
15	87-032-845-01		Siemens plug (H, HU models only)		1
16	87-034-971-01		Connection cord CW-252BSK		1
17	87-056-013-01		Guarantee card (C model only)		

820825(1)-Z

AIWA Co., Ltd. Tokyo Japan

Printed in Jap

WA

WIRING–1

NOTES (1) B(+) Pattern Component side pattern Others pattern

(2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when t
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmete

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J

7. LH REC/PB Sensitivity Adjustment
Settings:
- Recording mode
- Test tape: TTA-119J
- TAPE SELECTOR switch: LH
- Output level: 350mV
- Input signal: 1 kHz, –10dB
- Adjustment locations: SFR7 (L-ch) SFR8 (R-ch)

Method:
Record and playback the 1 kHz signal. Adjust SFR7,8 so that the output deviation are $0 \pm \frac{0.5}{0}$ dB

1. Tape Speed Adjustment
Adjustment location: SFR of motor

S7 (MOTOR)
M1
(MOTOR)

(Z MODEL ONLY) 1 DIN C.B
(H,HU,U,C,E,K,G MODEL ONLY) LINE IN/REC J2 J1 LINE OUT/ PLAY J4 J3
(Z MODEL ONLY) 1 DIN C.B
MECH EARTH
(H,HU,U,C,E,K,G MODEL ONLY) A MAIN C.B

B DOLBY-NR C.B

A MAIN C.B

S4 (PLAY)

C SWITCH-2 C.B

F LED C.B

S5 (CUE/REV)

6. LH REC/PB Frequency Characteristic
Adjustment
Settings:
- Recording mode
- Test tape: TTA-119J
- TAPE SELECTOR switch: LH
- Output level: 35mV
- Input signal: 1 kHz/10 kHz, –10 dB
- Adjustment locations: SFR3 (L-ch) SFR4 (R-ch)

Method:
Record and playback the 1 kHz and 10 kHz signals. Adjust SFR 3,4 so that the 1 kHz output deviation are +0.5dB.

4. Playback Output Adjustment
Settings:
- Playback mode
- Test tape: TTA-161
- TAPE SELECTOR switch: LH
- Adjustment locations: SFR 1 (L-ch), SFR 2 (R-ch)

Method:
Playback the test tape and adjust SFR1, 2 so that the LINE output is 480mV

J5,6 MIC
J6 J5 C JACK-I C.B

(Z MODEL ONLY)

G SWITCH-2 C.B LED C.B
D VOLUME-I C.B
VR1,2 REC VOLUME

5. Bias Trap Coil Adjustment
Settings:
- Recording mode
- Test tape: AC711
- TAPE SELECTOR switch: METAL
- Test point: TP1 (L-ch) TP2 (R-ch)
- Adjustment locations: L1 (L-ch), L2 (R-ch)

Method:
Adjust so that the level at test point TP1,2 become reduced to minimum value.

POWER TRANSFORMER (SECONDARY)
F LED C.B
E SWITCH-1 C.B
POWER TRANSFORMER (F AC POWER CORD
H VOLUM
VR3 LH BIAS FINE
C SWITCH-2 C.B
(E H)
(R P H)
F LED C.B
(Z MODE

3. Playback Frequency Charac
Settings:
- Test tape: TTA-117E
- TAPE SELECTOR switch
- Adjustment locations: C1 C2

Method:
Playback the 1 kHz and so that the 1 kHz and 10 are +1dB.

TP1 Bias Tra
TP2 Bias Tra

2. Azimuth Adjustment
Settings:
- Playback mode
- Test tape: TTA-117E
- TAPE SELECTOR switch
- Adjustment location: Azi

Method:
Playback the test tape a output of the 10 kHz reaches the maximum a the left and right channel

8. CrO2 R
(Z mo
Settings
- Test
- TAPE
- Adjus
For ot
Charact

NOTES (1) B(+) Pattern Component side pattern Others pattern
(2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

S7 (MOTOR)
M1
(MOTOR)
1. Tape Speed Adjustment
Adjustment location: SFR of motor

(Z MODEL ONLY) 1 DIN C.B
(H,HU,U,C,E,K,G MODEL ONLY)
LINE IN/REC J2 J1
LINE OUT/PLAY J4 J3
(Z MODEL ONLY) 1 DIN C.B
MECH EARTH
(H,HU,U,C,E,K,G MODEL ONLY) A MAIN C.B

B DOLBY-NR C.B
A MAIN C.B
S4 (PLAY)
G SWITCH-2 C.B
F LED C.B
S5 (CUE/REV)
S2
J5,6 MIC
J6 J5 C JACK-1 C.B
(Z MODEL ONLY)
VR1,2 REC VOLUME
D VOLUME-1 C.B
G SWITCH-2 C.B F LED C.B

POWER TRANSFORMER (SECONDARY)
F LED C.B
E SWITCH-1 C.B
POWER TRANSFORMER (PRIMARY) AC POWER CORD
J7 HEADPHONES
H VOLUME-2 C.B
VR3 LH BIAS FINE
C SWITCH-2 C.B
(E H)
F LED C.B
SFR9
(Z MODEL ONLY)
(R P H)

1. Tape Speed Adjustment
Adjustment location: SFR of motor

ritivity Adjustment
de
A-119J
TOR switch: LH
350mV
kHz, –10dB
cations: SFR7 (L-ch)
SFR8 (R-ch)
layback the 1 kHz signal. Adjust
hat the output deviation are

quency Characteristic
de
A-119J
TOR switch: LH
35mV
kHz/10 kHz, –10 dB
cations: SFR3 (L-ch)
SFR4 (R-ch)
layback the 1 kHz and 10 kHz
SFR 3,4 so that the 1 kHz out-
re +0.5dB.

Adjustment
le
A-161
TOR switch: LH
cations: SFR 1 (L-ch),
SFR 2 (R-ch)
test tape and adjust SFR1, 2 so
output is 480mV

8. CrO_2 REC/PB Frequency Characteristic Adjustment
(Z model only)
Settings:
- Test tape: TTA-119G
- TAPE SELECTOR switch: CrO_2
- Adjustment locations: SFR9

For others, proceed as LH REC/PB Frequency Characteristic Adjustment.

3. Playback Frequency Characteristic Adjustment
Settings:
- Test tape: TTA-117E
- TAPE SELECTOR switch: METAL
- Adjustment locations: C1,3,5 (L-ch)
  C2,4,6 (R-ch)

Method:
Playback the 1 kHz and 10 kHz signals. Adjust so that the 1 kHz and 10 kHz output deviation are +1dB.

TP1	Bias Trap Coil Adjustment (L-ch)
TP2	Bias Trap Coil Adjustment (R-ch)

2. Azimuth Adjustment
Settings:
- Playback mode
- Test tape: TTA-117E
- TAPE SELECTOR switch: METAL
- Adjustment location: Azimuth adjusting screw

Method:
Playback the test tape and adjust so that the output of the 10 kHz and 1 kHz section reaches the maximum and same phase for both the left and right channel.

5. Bias Trap Coil Adjustment
Settings:
- Recording mode
- Test tape: AC711
- TAPE SELECTOR switch: METAL
- Test point: TP1 (L-ch) TP2 (R-ch)
- Adjustment locations: L1 (L-ch), L2 (R-ch)

Method:
Adjust so that the level at test point TP1,2 become reduced to minimum value.

AD-3150
H, HU, U, C, E, K, G, Z

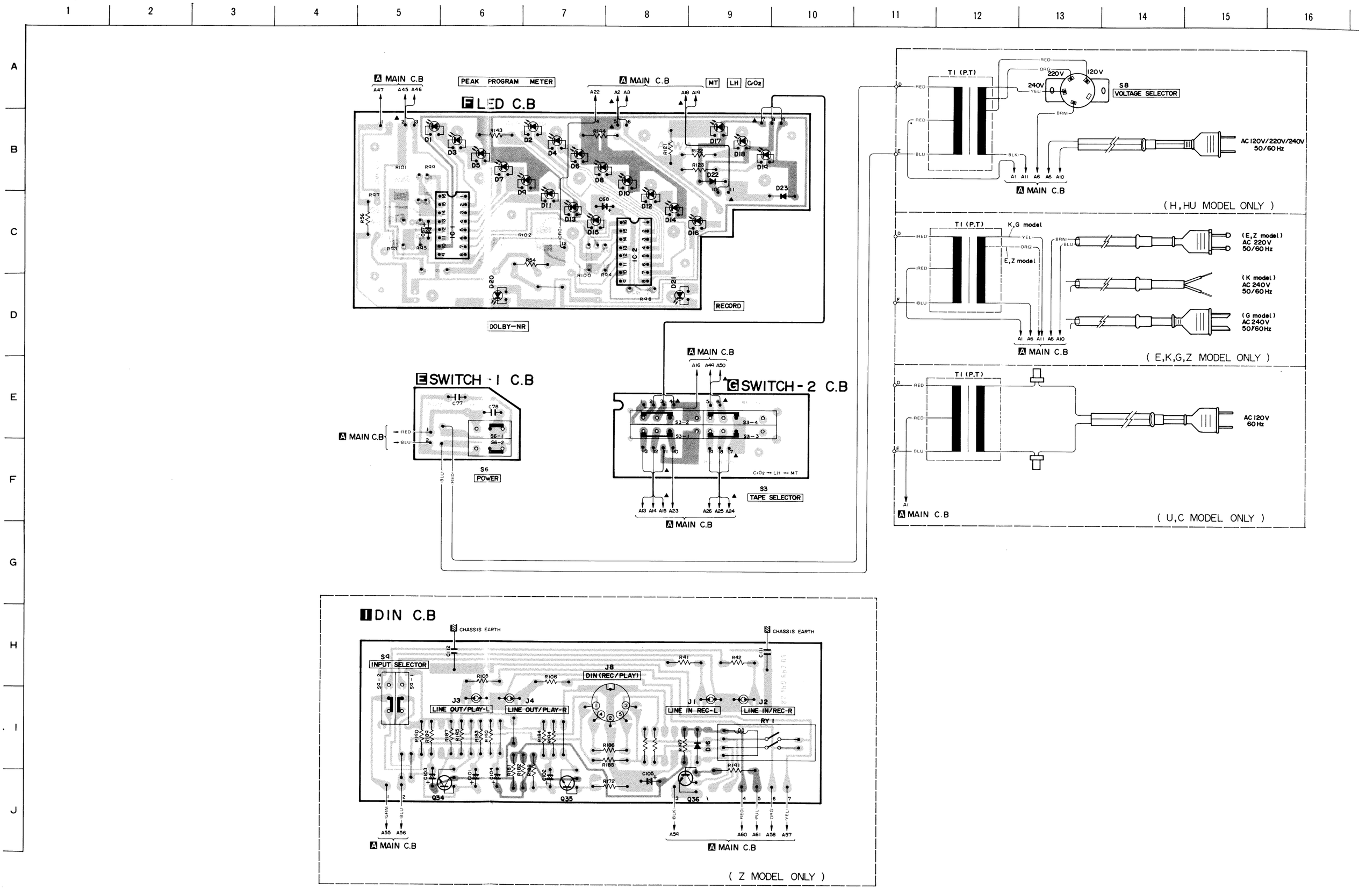
AD-3150
H, HU, U, C, E, K, G, Z

AD-3150
H, HU, U, C, E, K, G, Z

NOTES (1) B(+) Pattern Component side pattern Others pattern

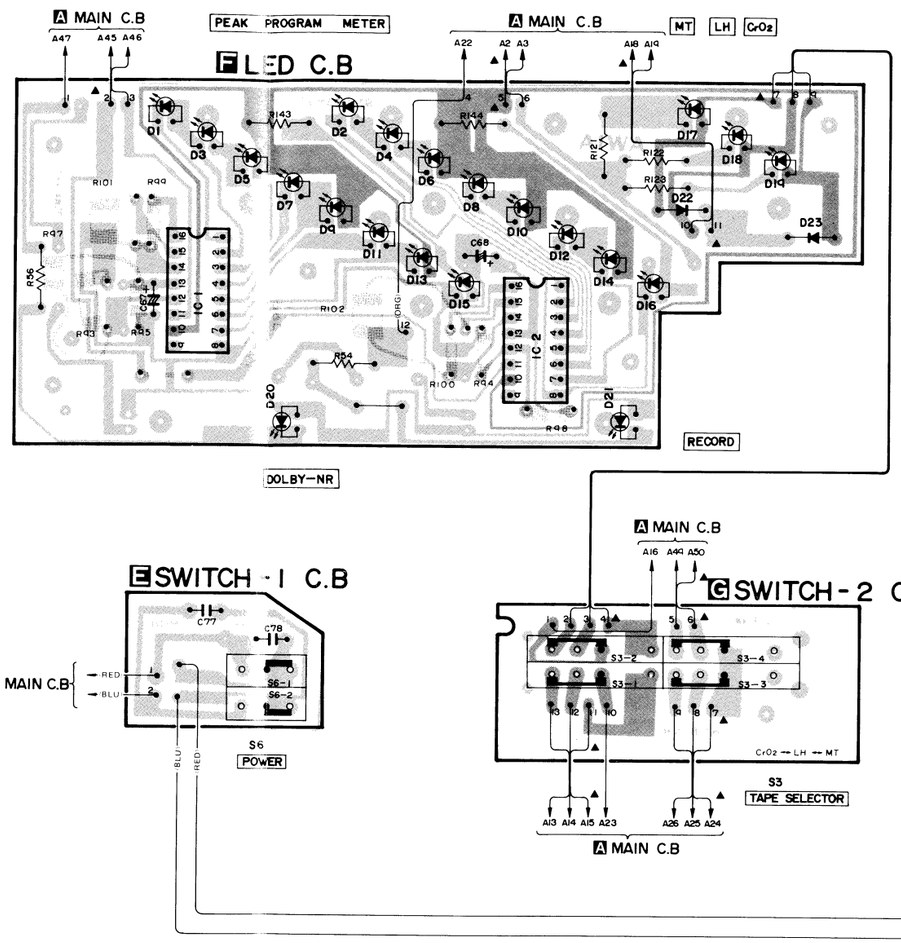
(2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.

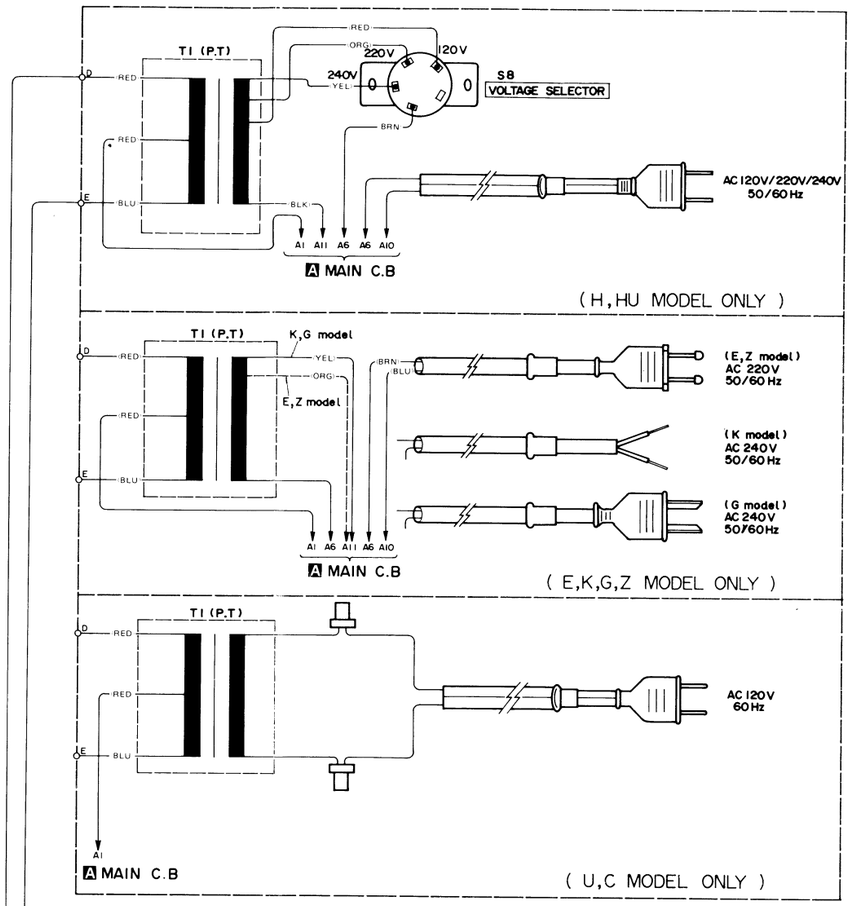
WIRING–2

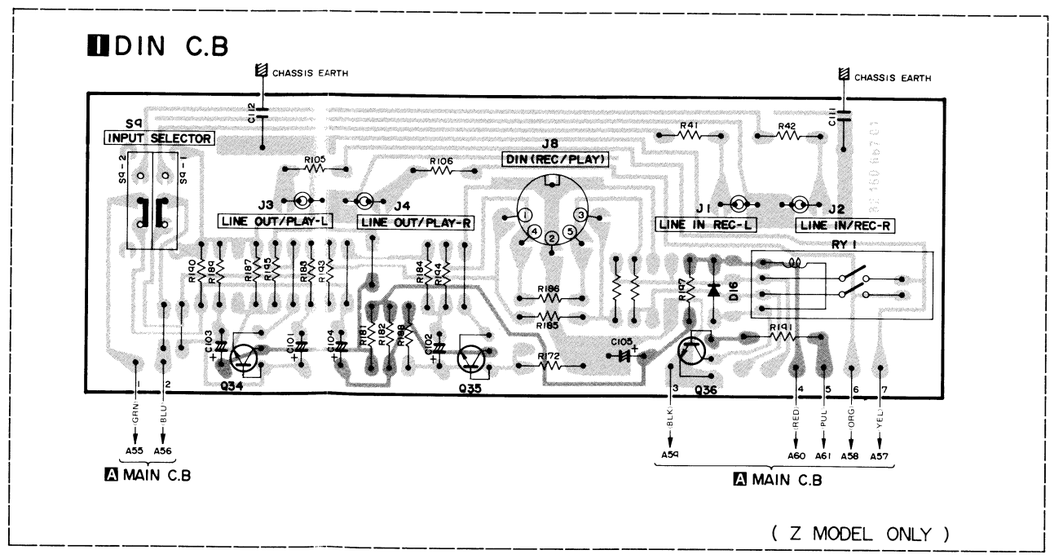


AD-3150 H, HU, U, C, E, K, G, Z	AD-3150 H, HU, U, C, E, K, G, Z

NOTES (1) B(+) Pattern Component side pattern Others pattern
(2) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.







ELECTRICAL MAIN PARTS LIST

Symbol No.	Part No.	Description
≪MAIN CIRCUIT BOARD SECTION≫		
PCB-A	*	Main circuit board
IC3	87-027-739-01	IC, NJM4556D
Q1,2	89-322-406-01	Transistor, 2SC2240 (BL)
Q3,4,5,6 7,8,9,10 11,12,13, 14,15,16, 17,18,21, 22,23	89-326-347-01	Transistor, 2SC2634S
Q19	89-313-846-01	Transistor, 2SC1384 (R)
Q20,29,30	89-320-011-01	Transistor, 2SC2001 (K)
Q24	89-313-833-01	Transistor, 2SC1383 (R)
Q25	89-408-804-51	Transistor, 2SD880Y (G, R)
Q26	89-309-456-01	Transistor, 2SC945L (P)
Q27	89-107-335-01	Transistor, 2SA733K
D1,4,12, D5	87-027-097-01	Diode, 1S1555
D5	87-027-449-01	Zener diode, HZ15-3L
D6	87-027-662-01	Zener diode, HZ22-1L
D7	87-027-376-01	Diode, 1B4B41
D8	87-027-537-01	Diode, S5277B (LB)
L1,2	87-005-127-01	Coil, 22mH
L3,4	87-003-069-01	Coil, 4,7mH
L5	82-401-661-01	Choke coil, 600μH
L6	82-176-628-01	OSC coil
J1,2,3,4	87-049-055-01	Pin jack, 4P (LINE IN/REC LINE OUT/PLAY) (H, HU, U, C, E, K, G models only)
S1	82-185-606-01	Slide switch (REC/PB)
S2	82-186-622-01	Push-switch (DOLBY-NR)
⚠F1	87-035-186-01	Fuse, "T" 125mA (H, HU, E, K, G, Z models only)
	87-098-007-01	Fuse label, "T" 125mA (H, HU, E, K, G, Z models only)
⚠	87-033-147-01	Fuse clamp (H, HU, E, K, G, Z models only)
SFR1,2	87-021-569-01	Semi-fixed resistor, 50kΩ-B
SFR3,4	87-021-570-01	Semi-fixed resistor, 100kΩ-B
SFR7,8	87-021-568-01	Semi-fixed resistor, 20kΩ-B
SFR9	82-587-634-01	Semi-fixed resistor, 100Ω-B (Z model only)
⚠	82-304-743-01	1 P terminal
		< **Resistors** >
⚠R139	87-029-089-01	4.7Ω 1/4W Fuse resistor
⚠R176	87-029-023-01	47Ω 1/4W Fuse resistor
		< **Capacitors** >
C7,8	87-015-939-01	10μF 16V Electrolytic LL
C17,18	80-002-457-14	100μF 3V Tantalun
C31,32	87-014-037-01	150pF PP
C35	87-014-128-01	1500pF 630V PP
C41,42	87-015-367-01	0.15μF 10V Aluminum solid
C11,12	87-018-032-01	100pF Ceramic
C1,2,3,4	87-018-034-01	150pF Ceramic
C5,6	87-018-038-01	330pF Ceramic
C9,10	87-018-044-01	1000pF Ceramic
C63,64	87-018-047-01	0.01μF 16V Ceramic

Symbol No.	Part No.	Description
≪DOLBY-NR CIRCUIT BOARD SECTION≫		
PCB-B	82-187-602-01	Dolby-NR circuit board
IC301,302	87-027-754-01	IC, LM1111C
Q301,302,303, 304,305,306, 307,308,309, 310,311,312, 313,314	89-309-456-01	Transistor, 2SC945L (P)
D301	87-027-702-01	Zener diode, HZ6C2L
D303,304	87-027-097-01	Diode, 1S1555
MPX1,2	82-187-601-01	MPX filter
	87-049-115-01	Pin, 5P
	87-049-119-01	Pin, 9P
C311, 312, 315, 316	87-018-044-01	1000pF Ceramic
		< **Capacitor** >
C37,38	87-015-426-01	0.1μF 25V Aluminum solid
≪JACK-1 CIRCUIT BOARD SECTION≫		
PCB-C	*	Jack-1 circuit board
J5,6	87-049-073-01	Jack, 6.3φ (MIC)
≪VOLUME-1 CIRCUIT BOARD SECTION≫		
PCB-D	*	Volume-1 circuit board
VR1,2	87-021-679-01	Volume, 50kΩ-A (REC VOLUME)
≪SWITCH-1 CIRCUIT BOARD SECTION≫		
PCB-E	*	Switch-1 circuit board
⚠S6	87-031-668-01	Push-switch (POWER) (H, HU, E, K, G, Z models only)
⚠S6	82-185-609-01	Push-switch (POWER) (U, C models only)
≪LED CIRCUIT BOARD SECTION≫		
PCB-F	*	LED circuit board
IC1,2	87-027-879-01	IC, AN6882
D1,2,3,4, 5,6,17	87-027-542-01	LED, LN217RP
D7,8,9, 10,11,12, 13,14,15, 16,18	87-027-543-01	LED, LN317GP
D19	87-027-671-01	LED, LN417YP
D20	87-027-773-01	LED, GL-9NG4
D21	87-027-772-01	LED, GL-9PR4
D22,23	87-027-097-01	Diode, 1S1555
≪SWITCH-2 CIRCUIT BOARD SECTION≫		
PCB-G	*	Switch-2 circuit board
S3	82-185-607-01	Slide switch (TAPE SELECTOR)
≪VOLUME-2 CIRCUIT BOARD SECTION≫		
PCB-H	*	Volume circuit board
VR-3	82-185-612-01	Volume, 500Ω-B (LH, BIAS, FINE)
≪DIN CIRCUIT BOARD SECTION≫ = "Z" model only		
PCB-I	82-160-667-01	DIN circuit board
Q34,35,36	89-309-456-01	Transistor, 2SC945L (P)
D16	87-027-097-01	Diode, 1S1555
J1,2,3,4, 8, S 9	87-038-054-01	Jack plate ass'y (w/switch) (LINE IN/REC, LINE OUT/PLAY DIN, INPUT SELECTOR) (Z model only)
RY1	87-045-152-01	Lead relay, L24M

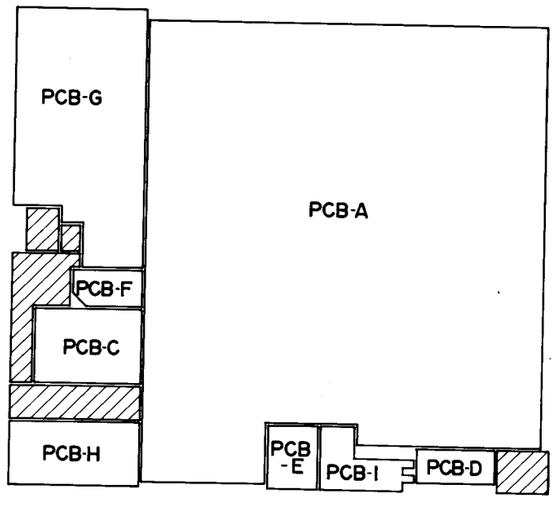
Symbol No.	Part No.	Description
≪MISCELLANEOUS≫		
⚠T1	82-185-602-01	Power transformer (H, HU model only)
⚠T1	82-185-603-01	Power transformer (U, C model only)
⚠T1	82-185-604-01	Power transformer (E, Z model only)
⚠T1	82-185-605-01	Power transformer (K, G model only)
J7	87-049-083-01	Jack, 6.3φ (HEADPHONES)
RPH	87-046-200-01	REC/PB head
EH	87-046-196-01	Erase head
M1	87-045-135-01	Motor, DC-EG
⚠	87-034-826-01	AC power cord (H, HU model only)
⚠	87-034-951-01	AC power cord (U, C model only)
⚠	87-034-877-01	AC power cord (E, Z model only)
⚠	87-034-872-01	AC power cord (K model only)
⚠	87-034-892-01	AC power cord (G model only)
⚠	87-085-165-01	Cord bushing (H, HU, U, C model only)
⚠	87-085-166-01	Holder, AC power cord (E, K, G, Z model only)
S4,7	87-031-615-01	Leaf switch (PLAY MOTOR)
S5	87-031-548-01	Leaf switch (CUE/REV)
⚠S8	87-031-586-01	Rotary switch (VOLTAGE SELECTOR) (H, HU model only)

⚠ Safety component symbol
This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.

Note; Combination Circuit Board

The parts on the electrical parts list which are indicated by an asterisk (*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 82-187-603-01



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PCB-D	*	Volume-1 circuit board
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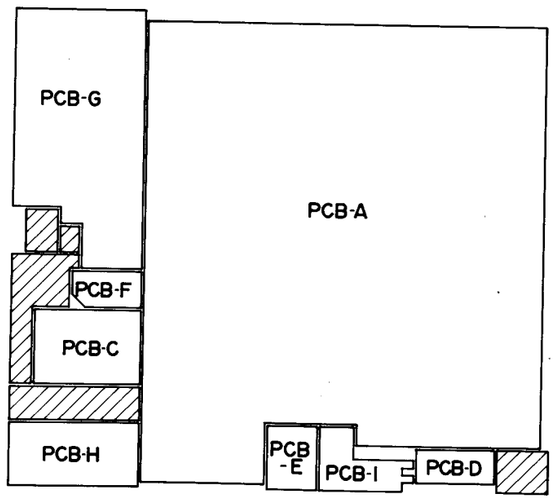
Combination circuit board 82-187-603-01



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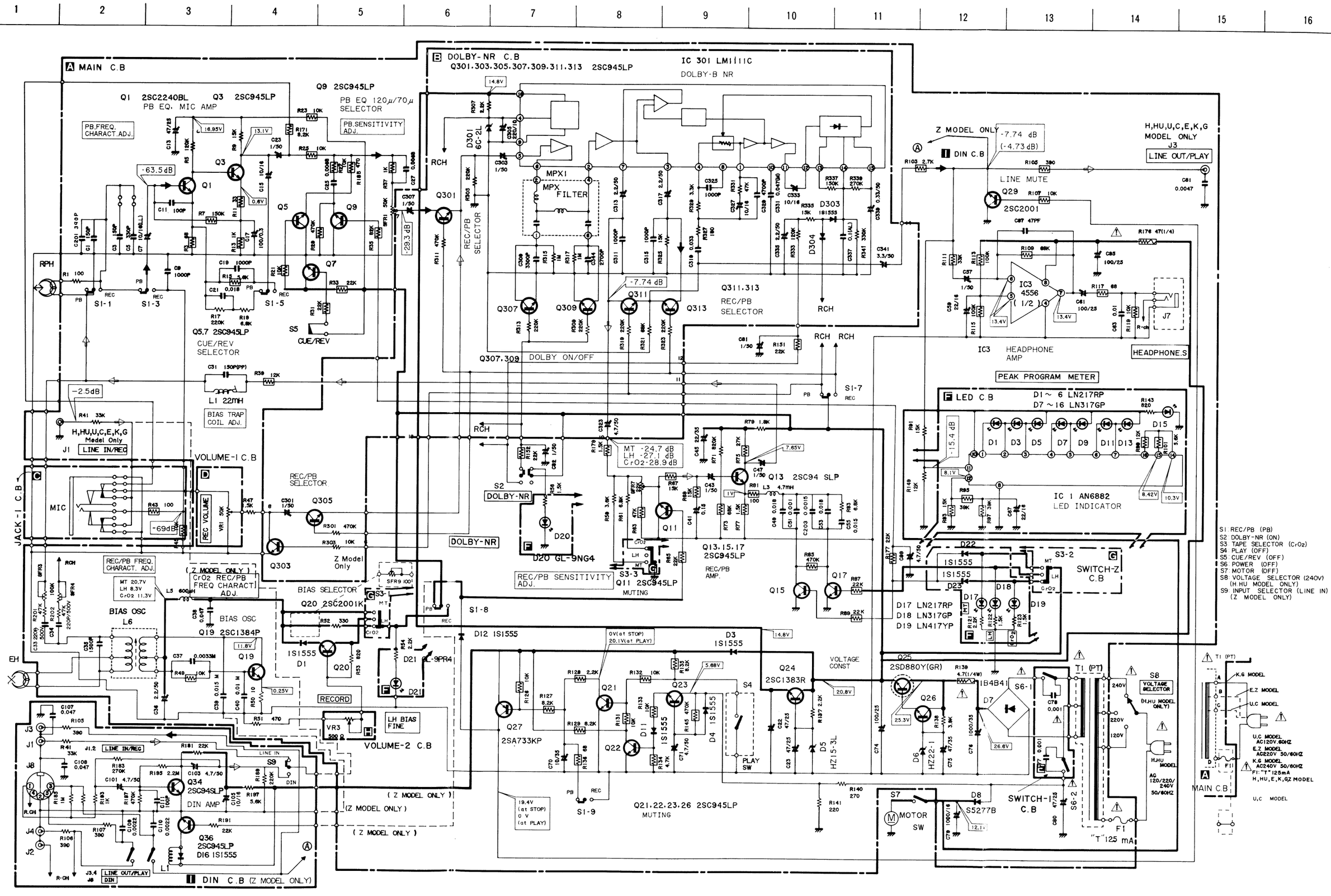
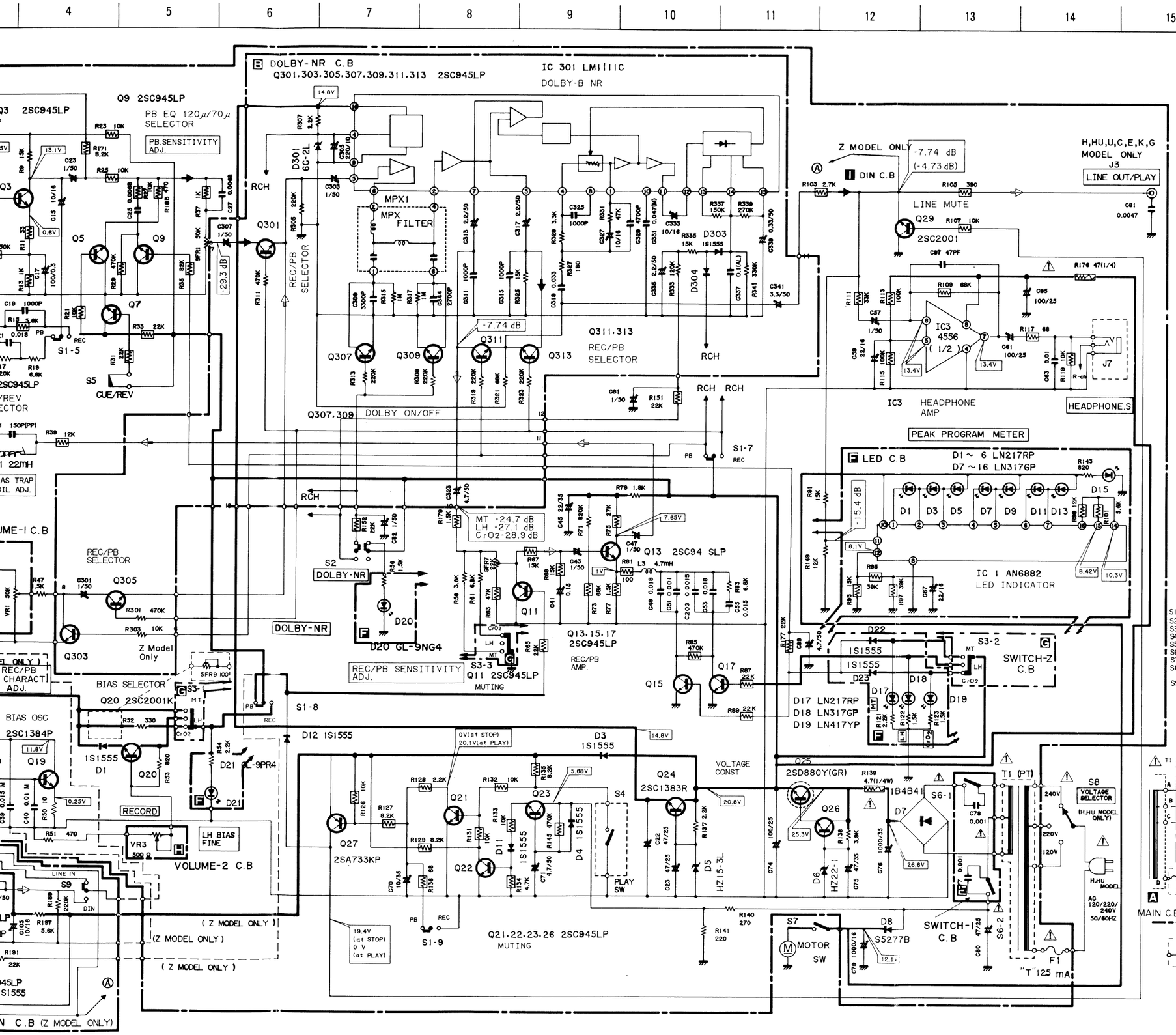
AD-3150
H, HU, U, C, E, K, G, Z

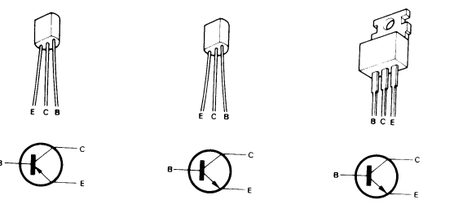
SCHEMATIC DIAGRAM



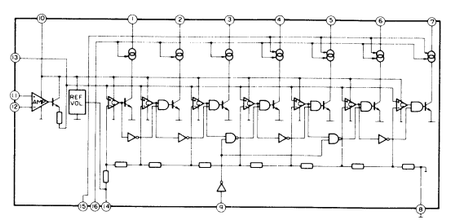
AD-3150	AD-3150
H, HU, U, C, E, K, G, Z	H, HU, U, C, E, K, G, Z



S1 REC/PB (PB)
S2 DOLBY-NR (ON)
S3 TAPE SELECTOR (CrO2)
S4 PLAY (OFF)
S5 CUE/REV (OFF)
S6 POWER (OFF)
S7 MOTOR (OFF)
S8 VOLTAGE SELECTOR (240V) (H HU MODEL ONLY)
S9 INPUT SELECTOR (LINE IN) (Z MODEL ONLY)



IC BLOCK (AN6882)



NOTES:

1) ■ B (+) power supply
2) ➡ Signal path
   ⇨ Rec path.
3) The voltage is the reference value measured with a tester (20 k-ohms/V DC) when there are no signals.
   But ( ) is with recording.
   An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.
4) Resistors with no designation have a rated power of 1/4W and a tolerance of ±5%.
5) Capacitors with no designation have a dielectirc strneght of less than 50WV.
6) The only capacitor tolerances indicated are ±2% (G), ±5% (J) and ±10% (K).
7) Ceramic capacitor symbols:
   ⊣⊢ High dielectric constant system (YW, YP, YZ)
   ⊣⊢ Semiconductor ceramic
8) Explanation of symbols
   (M) Mylar capacitor
   (A) Aluminum solid capacitor
   (PP) Polypropylene film capacitor
   (LL) Low-leakage capacitor
   (T) Tantalum capacitor
   Printed resistor
   Fuse resistor

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- This schematic diagram is subject to change without notice in the interests of improved performance.